NORTH CENTRAL FOREST EXPERIMENT STATION

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TIMBER VOLUME IN NEBRASKA, 1983

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ABSTRACT.--Presents statistics on Nebraska's growing-stock and sawtimber volumes by county for 1983. Includes map showing growing-stock volume distribution by county.

KEY WORDS: Growing stock, sawtimber, species, counties.

Nebraska's 537,800 acres of commercial forest land--land suitable for producing industrial timber--supported 456 million cubic feet of growing-stock[1] volume in 1983. This is an increase of 23 percent since the last inventory conducted by the USDA Forest Service in 1955, despite a decrease in the commercial forest land base of 24 percent. The increase is predominantly in softwood volume, which has more than doubled in the 28 years between surveys. The average growing-stock volume per acre increased from 353 cubic feet (2.8 cords per acre) in 1955 to 848 cubic feet (6.6 cords per acre) in 1983. This is due to the larger average tree size in 1983.

Ponderosa pine is the most abundant species in Nebraska, accounting for 35 percent of the growing-stock volume (table 1). Cottonwood, the second most plentiful species group in the State, showed an increase of 2.1 million cubic feet from 1955 to 1983. Oak ranked third with 44.5 million cubic feet.

These three species groups make up about three-fourths of the growing stock volume in Nebraska. The following tabulation compares growing-stock volumes by species group for both surveys:

	1955[2]	1983
	(Million cubic feet)	
Softwoods		
Ponderosa pine	79.8	160.3
Eastern redcedar	3.8	9.9
Jack pine	1.0	-
Total	84.6	170.2
Hardwoods		
Oak	35.3	44.6
Hickory	1.4	4.2
Basswood	5.8	6.0
Soft maple	1.7	5.4
Boxelder	1.6	5.3
Elm	51.3	12.4
Ash	27.8	25.9
Cottonwood	140.1	142.2
Willow	6.4	11.1
Hackberry	6.5	16.5
Black walnut	3.4	5.1
Other hardwoods[3]	4.3	7.1
Total	285.6	285.8
All species	370.2	456.0

[1]*Net volume of all live merchantable trees 5 inches d.b.h. and larger from the stump to a variable 4-inch top diameter outside bark of the central stem. Does not include limbs or cull tree volume.*

[2]*Figures from the 1955 survey have been adjusted because of changes in survey procedures and definitions.*

[3]*Other hardwoods are Texas buckeye, paper birch, honeylocust, Kentucky coffee tree, and mulberry, osage orange, catalpa, black locust.*

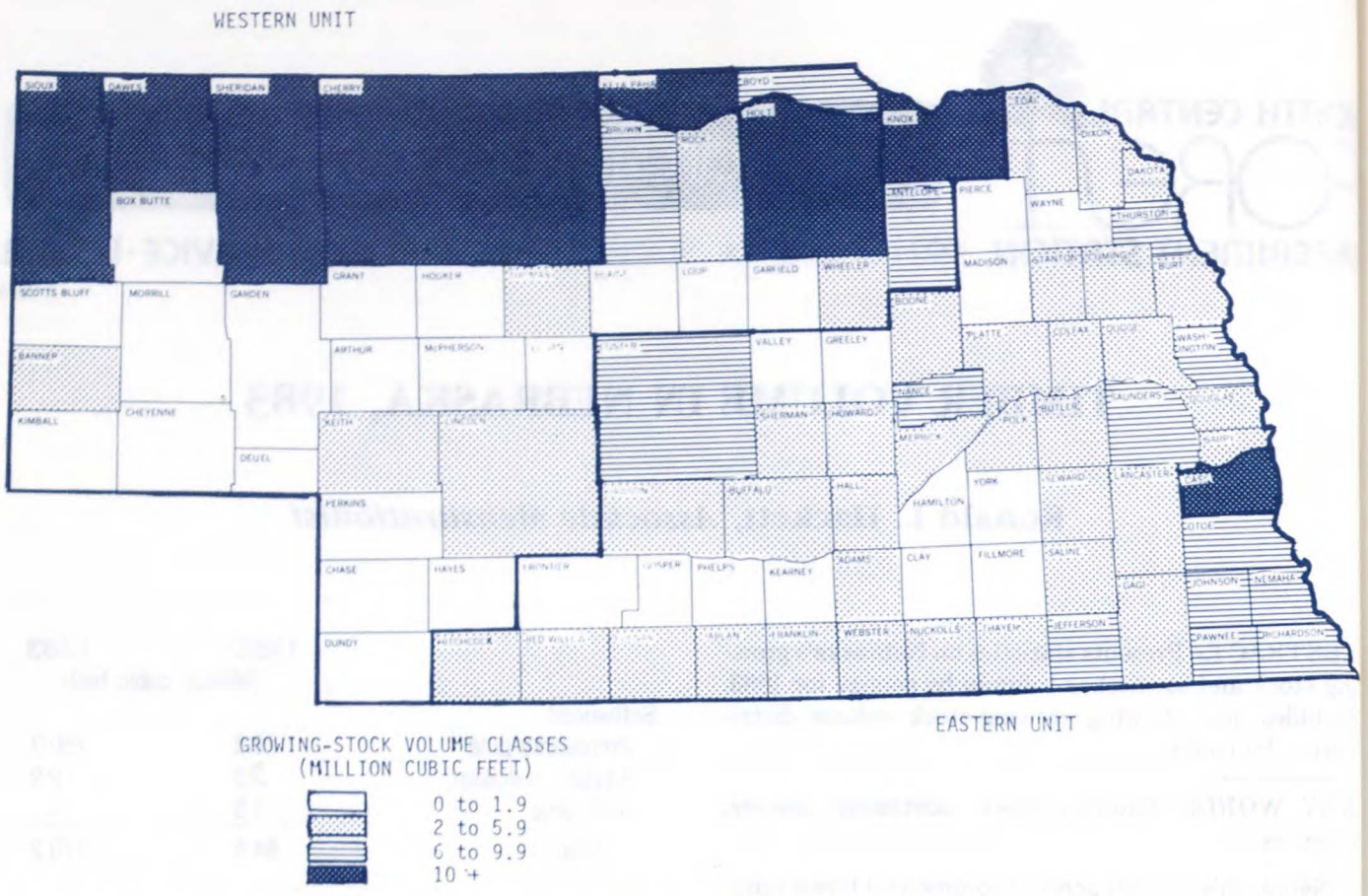

Figure 1.--*Growing stock volume in Nebraska counties, 1983.*

Included in the growing-stock volume are 1.7 billion board feet of sawtimber trees.[4] The average sawtimber volume per acre is 3,423.6 board feet. As with growing-stock, ponderosa pine is by far the leading sawtimber species in Nebraska and comprises 46 percent of the volume (table 2). The cottonwood species group is ranked second and accounts for 30 percent of the total sawtimber volume. Oak, ash, and hackberry account for most of the remaining sawtimber volume, as shown in the following tabulation:

	(Thousand board feet)[5]
Ponderosa pine	781,654
Cottonwood	510,947
Oak	138,956
Ash	89,308
Hackberry	44,308
Other species groups	146,333
Total	1,711,873

The major concentrations of timber are found along the northern border area and in the major river basins (fig. 1). Dawes County in the northwestern part of the State contains the largest volume of timber (12 percent of the total), with 52.2 million cubic feet of growing-stock and 248.6 million board feet of sawtimber. Thirty-one percent of the total ponderosa pine growing-stock volume is found in Dawes County.

These statistics are based on results from the forest inventory conducted by the North Central Forest Experiment Station. Fieldwork for the inventory was completed in May 1983. This is one of several papers that will present resource statistics for Nebraska.

Sampling error for Nebraska's total growing-stock volume of 456,011 thousand cubic feet is estimated to be ± 9 percent. Sawtimber sampling error is estimated to be ± 9 percent for the total of 1.7 billion board feet.

[4]*Net volume of live merchantable sawtimber trees (softwoods 9 inches d.b.h. or larger and hardwood 11 inches d.b.h. or larger) from the stump to a point in the central stem at which utilization for sawn products is limited by large branches, forks, or other defects, or by a top diameter outside bark of 7 inches for softwoods and 9 inches for hardwoods.*

[5]*International ¼-inch rule.*

Table 1.--Net volume of growing stock on commercial forest land by county and species group, Nebraska, 1983

(In thousand cubic feet)

EASTERN UNIT

County	All species	Species group													
		Ponderosa pine	Eastern redcedar	Oak	Hickory	Basswood	Soft maple	Elm	Ash	Cotton-wood	Willow	Boxelder	Hackberry	Black walnut	Other hardwoods 1/
Adams	1,870	--	39	369	42	25	51	118	202	696	51	31	154	53	39
Boone	1,840	--	11	440	48	29	66	151	211	541	51	48	146	44	54
Buffalo	5,449	--	362	201	29	57	92	160	371	3,369	203	96	298	80	131
Burt	3,627	--	85	992	102	70	55	177	302	1,230	66	75	247	88	138
Butler	3,307	--	62	390	72	65	110	195	255	1,575	140	71	206	79	87
Cass	11,278	--	303	1,288	158	194	332	638	1,130	5,297	434	226	802	198	278
Cedar	3,773	--	97	1,184	82	128	41	227	369	890	49	133	332	72	169
Clay	1,338	--	29	289	40	17	23	59	134	523	30	15	100	50	29
Colfax	2,512	--	33	378	75	37	45	61	245	1,162	101	55	160	86	74
Cuming	5,627	--	168	632	82	125	154	293	425	2,848	214	102	340	85	159
Custer	8,068	--	209	1,384	158	322	120	269	962	3,105	245	306	616	164	208
Dakota	4,775	--	87	1,165	109	74	109	256	465	1,657	137	103	387	86	140
Dawson	3,682	--	295	247	40	25	38	61	184	2,348	98	51	145	68	82
Dixon	4,756	--	101	1,857	110	100	22	307	426	819	31	141	444	113	285
Dodge	5,700	--	241	289	32	107	130	242	457	3,244	244	99	376	87	152
Douglas	5,359	--	57	1,613	166	68	131	364	402	1,570	124	107	407	142	208
Fillmore	619	--	14	60	6	13	17	32	96	264	24	18	52	9	14
Franklin	2,671	--	46	611	61	44	61	149	288	937	71	58	201	56	88
Frontier	1,046	--	12	248	28	18	34	77	68	374	34	23	72	25	33
Furnas	2,999	--	140	186	27	48	2	124	207	1,729	121	52	172	43	78
Gage	5,725	--	46	1,520	153	90	161	385	759	1,561	134	146	489	120	161
Gosper	320	--	6	37	6	7	8	9	29	150	15	10	23	11	9
Greeley	186	--	5	17	3	9	3	6	15	81	9	12	16	5	5
Hall	3,353	--	211	136	13	59	62	106	206	2,112	120	50	170	28	80
Hamilton	1,466	--	49	162	32	33	26	39	121	764	54	32	84	34	36
Harlan	2,095	--	30	251	57	20	40	51	205	1,020	97	46	142	75	61
Hitchcock	2,441	--	24	428	64	35	83	176	255	921	82	47	193	77	56
Howard	2,738	--	42	317	69	37	53	70	263	1,321	129	71	188	96	82
Jefferson	8,662	--	152	1,341	155	200	232	474	1,257	3,234	281	247	734	166	189
Johnson	6,327	--	131	704	111	122	198	409	584	2,870	254	139	473	171	161
Kearney	98	--	2	3	1	--	4	3	9	51	6	3	8	4	4
Lancaster	4,684	--	103	457	80	82	158	304	379	2,272	200	92	320	115	122
Madison	1,633	--	23	206	44	21	31	39	160	785	74	37	108	58	47
Merrick	3,629	--	265	257	35	49	59	115	182	2,222	99	56	157	49	84
Nance	6,834	--	171	635	117	103	204	353	534	3,478	309	142	440	159	189
Nemaha	5,927	--	85	839	168	89	109	147	573	2,764	250	137	388	204	174
Nuckolls	4,195	--	183	289	42	78	125	232	265	2,334	167	77	239	57	107
Otoe	8,306	--	163	1,032	197	134	307	556	590	3,930	334	163	490	204	206
Pawnee	6,347	--	274	400	51	115	170	310	474	3,514	264	129	393	89	164
Phelps	415	--	14	118	7	6	5	22	25	148	9	6	32	5	18
Pierce	1,167	--	30	83	17	37	21	38	99	545	66	55	100	38	38
Platte	4,076	--	114	379	54	81	142	261	283	2,083	175	78	257	61	108
Polk	2,003	--	89	179	21	41	33	54	250	1,043	62	40	128	22	41
Red Willow	3,020	--	105	222	34	55	89	160	218	1,631	131	58	187	49	81
Richardson	7,030	--	101	866	189	74	136	170	688	3,408	324	155	466	249	204
Saline	5,535	--	135	507	88	99	198	366	396	2,773	248	114	355	107	149
Sarpy	4,878	--	107	1,590	121	56	89	339	370	1,283	82	107	407	108	219
Saunders	6,137	--	331	297	47	82	135	238	392	3,635	250	120	351	100	159
Seward	3,989	--	70	436	80	67	148	289	320	1,845	165	81	276	110	102

(Table 1 continued on next page)

1/ Other hardwoods - Texas Buckeye, paper birch, honeylocust, kentucky coffeetree, mulberry, osage orange, catalpa, black locust

(Table 1 continued)

County	All species	Species group: Ponderosa pine	Eastern redcedar	Oak	Hickory	Basswood	Soft maple	Elm	Ash	Cotton-wood	Willow	Boxelder	Hackberry	Black walnut	Other hardwoods 1/
Sherman	1,673	--	72	153	24	21	29	49	126	929	63	28	98	34	47
Stanton	2,656	--	93	149	13	52	44	132	394	1,214	93	59	264	92	57
Thayer	2,452	--	46	190	45	11	51	72	231	1,242	135	67	189	90	83
Thurston	8,887	--	218	1,840	125	1,387	112	410	509	3,106	209	121	525	161	164
Valley	670	--	14	51	11	14	13	20	61	327	37	23	54	23	22
Washington	8,247	--	116	2,921	258	106	171	514	582	2,134	156	154	672	171	292
Wayne	1,149	--	10	372	43	14	19	53	91	359	22	16	77	32	41
Webster	5,699	--	128	604	85	96	186	343	612	2,641	232	125	409	98	140
York	803	--	23	47	8	11	24	43	62	426	41	19	58	17	24
Total	225,748	--	6,172	33,858	4,135	5,159	5,381	11,317	19,768	100,334	7,846	4,872	15,617	4,917	6,372
WESTERN UNIT															
Antelope	7,718	1,206	257	1,178	--	35	--	85	630	3,930	241	21	67	11	57
Arthur	352	--	3	8	--	--	--	--	12	282	42	--	5	--	--
Banner	3,050	3,050	--	--	--	--	--	--	--	--	--	--	--	--	--
Blaine	994	74	26	211	--	8	--	5	104	530	15	3	9	1	8
Box Butte	54	--	--	--	--	--	--	2	10	35	7	--	--	--	--
Boyd	6,268	2,143	216	522	--	10	--	102	425	2,477	270	27	40	8	28
Brown	7,273	3,367	284	881	--	210	--	25	355	1,746	87	59	91	42	126
Chase	206	--	5	4	--	--	--	--	6	166	22	--	3	--	--
Cherry	9,903	5,483	265	808	--	16	--	55	356	2,564	207	41	46	13	49
Cheyenne	189	--	--	--	--	--	--	--	42	147	--	--	--	--	--
Dawes	52,487	49,846	29	101	--	4	--	52	149	2,009	260	--	34	--	3
Deuel	159	--	7	--	--	--	--	4	19	116	13	--	--	--	--
Dundy	1,254	64	25	105	--	3	--	19	87	851	81	6	11	--	2
Garden	529	215	19	4	--	--	--	--	5	263	21	--	2	--	--
Garfield	1,316	407	31	145	--	4	--	1	64	600	43	3	11	1	6
Grant	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hayes	587	275	13	14	--	--	--	14	39	206	22	3	--	--	1
Holt	14,248	4,324	596	1,632	--	32	--	130	883	5,856	494	69	120	23	89
Hooker	569	106	16	115	--	3	--	--	49	252	7	13	4	--	4
Keith	2,571	--	70	52	--	1	--	104	174	1,956	194	--	19	--	1
Keya Paha	10,957	6,025	430	1,121	--	17	--	64	439	2,465	194	48	51	24	79
Kimball	397	397	--	--	--	--	--	--	--	--	--	--	--	--	--
Knox	15,989	3,957	681	2,178	--	446	--	106	1,059	6,474	435	55	254	82	262
Lincoln	3,915	415	322	126	--	--	--	127	284	2,428	166	6	41	--	--
Logan	515	231	48	85	--	1	--	10	26	90	4	6	9	1	4
Loup	502	37	12	94	--	3	--	5	58	267	16	3	4	--	3
McPherson	200	63	3	33	--	1	--	--	14	79	2	3	1	--	1
Morrill	1,125	109	58	--	--	--	--	45	95	764	54	--	--	--	--
Perkins	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock	3,216	1,063	140	454	--	11	--	34	195	1,179	67	18	28	5	22
Scotts Bluff	1,601	146	92	4	--	--	--	26	70	1,201	60	--	2	--	--
Sheridan	34,562	33,319	22	143	--	4	--	22	133	802	89	8	12	1	7
Sioux	41,945	40,608	47	201	--	6	--	47	127	798	68	21	12	2	8
Thomas	3,739	3,229	17	125	--	4	--	--	52	293	4	6	5	--	4
Wheeler	1,873	157	34	365	--	14	--	12	171	1,058	29	3	18	--	12
Total	230,263	160,316	3,768	10,709	--	833	--	1,096	6,132	41,884	3,214	422	899	214	776
All units	456,011	160,316	9,940	44,567	4,135	5,992	5,381	12,413	25,900	142,218	11,060	5,294	16,516	5,131	7,148

Table 2.--Net volume of sawtimber on commercial forest land by county and species group, Nebraska, 1983

(In thousand board feet)[1/]

EASTERN UNIT

County	All species	Species group													
		Ponderosa pine	Eastern redcedar	Oak	Hickory	Basswood	Soft maple	Elm	Ash	Cotton-wood	Willow	Boxelder	Hackberry	Black walnut	Other hardwoods[2/]
Adams	5,708	--	58	1,188	30	105	107	146	789	2,354	184	98	429	151	69
Boone	5,478	--	12	1,296	55	137	138	222	900	1,732	226	184	344	122	110
Buffalo	16,956	--	615	833	30	270	228	220	1,246	11,611	501	175	881	73	273
Burt	10,661	--	110	2,762	95	308	77	262	1,222	4,166	218	262	611	206	362
Butler	10,288	--	99	1,344	47	289	228	295	918	5,490	446	179	590	191	172
Cass	35,726	--	448	4,398	172	909	777	865	4,375	18,765	1,297	563	2,202	483	472
Cedar	11,292	--	164	3,343	137	650	90	282	1,513	3,124	162	467	814	116	430
Clay	3,992	--	42	883	11	65	29	69	500	1,758	95	43	283	144	70
Colfax	7,614	--	65	1,110	6	137	44	129	864	4,059	274	127	409	166	224
Cuming	17,959	--	226	2,173	95	577	354	398	1,565	10,272	586	208	994	222	289
Custer	25,652	--	499	4,412	73	1,588	222	374	3,673	10,988	649	888	1,478	260	548
Dakota	14,731	--	120	3,641	98	348	241	358	1,841	5,809	432	310	1,047	181	305
Dawson	10,869	--	533	659	7	108	61	110	591	7,742	255	107	411	90	195
Dixon	13,477	--	94	4,848	230	499	33	382	1,784	2,944	98	534	1,092	164	775
Dodge	18,490	--	368	1,268	57	507	336	281	1,553	11,817	576	134	1,166	158	269
Douglas	15,566	--	32	4,638	169	293	242	536	1,602	5,239	485	386	1,091	338	515
Fillmore	2,013	--	26	209	8	63	41	43	387	946	71	54	122	17	26
Franklin	8,132	--	51	1,775	64	199	122	215	1,187	3,273	230	187	494	134	201
Frontier	3,116	--	17	755	27	83	71	113	251	1,258	128	74	204	65	70
Furnas	9,548	--	226	732	31	226	172	171	708	6,138	315	89	521	78	141
Gage	17,332	--	50	4,519	147	423	330	563	3,263	5,140	561	551	1,118	323	344
Gosper	988	--	16	115	--	31	9	17	93	536	40	23	64	15	29
Greeley	600	--	17	72	--	49	7	8	39	293	24	26	46	3	16
Hall	10,677	--	347	618	27	282	164	128	693	7,384	273	67	528	37	129
Hamilton	4,565	--	90	537	5	148	42	64	421	2,658	141	70	231	65	93
Harlan	6,369	--	62	751	--	64	49	110	696	3,589	258	97	376	126	191
Hitchcock	7,421	--	31	1,383	45	153	168	240	995	3,099	306	149	528	217	107
Howard	8,376	--	100	977	--	147	68	142	869	4,663	342	153	516	149	250
Jefferson	27,636	--	282	4,427	126	971	516	645	5,167	11,330	910	767	1,734	407	354
Johnson	19,692	--	213	2,479	96	575	439	533	2,115	9,991	795	354	1,377	423	302
Kearney	300	--	6	11	--	--	5	6	24	187	16	6	26	2	11
Lancaster	14,673	--	155	1,655	73	375	352	414	1,350	8,003	622	214	953	290	217
Madison	4,978	--	50	622	--	75	36	84	543	2,758	197	82	287	99	145
Merrick	11,070	--	460	867	33	234	131	161	624	7,462	267	124	461	85	161
Nance	21,367	--	277	2,243	80	461	435	532	1,842	12,281	901	310	1,290	314	401
Nemaha	18,021	--	175	2,492	10	337	118	307	1,984	9,691	672	316	1,014	370	535
Nuckolls	13,331	--	293	1,170	63	374	307	314	928	8,212	487	159	735	130	159
Otoe	25,381	--	256	3,491	141	585	632	850	2,184	13,298	1,173	455	1,389	548	379
Pawnee	20,287	--	450	1,627	79	558	422	414	1,666	12,486	718	259	1,176	152	280
Phelps	1,277	--	14	350	14	28	15	25	96	555	19	16	97	7	41
Pierce	3,694	--	91	338	--	192	45	59	260	1,981	167	128	298	21	114
Platte	13,012	--	163	1,471	72	386	340	356	1,007	7,417	528	166	792	157	157
Polk	6,497	--	145	609	13	191	75	72	1,013	3,710	146	97	300	49	77
Red Willow	9,644	--	161	870	41	255	213	219	755	5,847	366	110	567	99	141
Richardson	21,375	--	205	2,590	--	243	158	364	2,347	11,979	857	329	1,242	427	634
Saline	17,456	--	200	1,906	96	468	457	520	1,399	9,796	775	265	1,070	253	251
Sarpy	14,070	--	114	4,461	188	268	188	460	1,517	4,317	321	400	1,085	212	539

(Table 2 continued on next page)

[1/] International 1/4-inch rule.

[2/] Other hardwoods - Texas Buckeye, paper birch, honeylocust, kentucky coffeetree, mulberry, osage orange, catalpa, black locust

(Table 2 continued)

County	All species	Species group: Ponderosa pine	Eastern redcedar	Oak	Hickory	Basswood	Soft maple	Elm	Ash	Cotton-wood	Willow	Boxelder	Hackberry	Black walnut	Other hardwoods 2/
Saunders	19,235	--	574	1,219	51	392	326	330	1,261	12,691	655	217	1,076	127	316
Seward	12,293	--	104	1,537	70	301	320	399	1,155	6,347	567	209	814	291	179
Sherman	5,175	--	118	490	13	91	58	77	437	3,242	155	53	272	57	112
Stanton	8,482	--	161	587	17	254	113	96	1,454	4,379	216	129	748	216	112
Thayer	7,489	--	104	601	--	39	83	135	712	4,440	352	130	542	101	250
Thurston	27,698	--	382	5,024	47	5,244	190	1,175	1,790	10,735	562	283	1,517	337	412
Valley	2,083	--	39	181	--	55	24	35	176	1,179	96	53	157	22	66
Washington	24,281	--	106	8,732	249	487	344	722	2,299	7,183	608	560	1,893	400	698
Wayne	3,334	--	--	1,053	26	50	20	85	362	1,207	77	59	197	85	113
Webster	18,148	--	188	2,141	90	449	431	486	2,418	9,337	721	331	1,083	241	232
York	2,551	--	40	194	9	54	58	61	196	1,539	113	37	176	23	51
Total	698,126	--	10,044	106,677	3,363	22,650	11,301	16,679	73,619	350,427	23,232	12,823	42,958	10,239	14,114
						WESTERN UNIT									
Antelope	27,919	6,108	328	3,701	--	181	--	79	1,449	15,264	578	--	98	54	79
Arthur	1,222	--	--	40	--	--	--	--	59	1,040	58	--	25	--	--
Banner	14,094	14,094	--	--	--	--	--	--	--	--	--	--	--	--	--
Blaine	3,510	377	19	654	--	40	--	--	253	2,085	73	--	--	3	6
Box Butte	166	--	--	--	--	--	--	--	33	100	33	--	--	--	--
Boyd	24,085	10,681	500	1,535	--	51	--	57	1,217	9,028	861	--	62	37	56
Brown	29,189	16,798	444	2,578	--	700	--	--	920	7,058	224	--	212	118	137
Chase	730	--	14	20	--	--	--	--	29	625	29	--	13	--	--
Cherry	41,639	27,107	423	2,450	--	81	--	34	929	9,885	481	--	87	65	97
Cheyenne	601	--	--	--	--	--	--	--	--	601	--	--	--	--	--
Dawes	248,606	239,628	30	395	--	12	--	69	477	7,437	421	--	137	--	--
Deuel	546	--	29	--	--	--	--	--	63	391	63	--	--	--	--
Dundy	4,437	320	59	339	--	17	--	22	246	3,228	169	--	37	--	--
Garden	2,128	947	72	20	--	--	--	--	29	1,019	28	--	13	--	--
Garfield	5,163	2,014	42	462	--	23	--	--	173	2,345	66	--	24	6	8
Grant	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hayes	2,381	1,363	39	38	--	--	--	11	106	716	104	--	--	2	2
Holt	54,227	21,645	1,237	4,904	--	176	--	57	2,158	22,436	1,135	--	197	113	169
Hooker	2,101	535	25	335	--	17	--	--	117	1,033	35	--	--	2	2
Keith	8,879	--	234	223	--	6	--	136	451	7,318	425	--	86	--	--
Keya Paha	45,798	30,055	662	3,384	--	90	--	33	1,161	9,611	437	--	61	121	183
Kimball	1,893	1,893	--	--	--	--	--	--	--	--	--	--	--	--	--
Knox	59,087	19,824	1,271	6,541	--	1,523	--	12	2,676	25,279	925	--	567	220	249
Lincoln	14,087	2,051	1,358	132	--	--	--	33	798	8,910	805	--	--	--	--
Logan	1,976	1,165	152	205	--	6	--	--	51	366	17	--	--	6	8
Loup	1,743	192	10	289	--	17	--	--	149	1,009	73	--	--	2	2
McPherson	781	312	--	98	--	6	--	--	35	321	9	--	--	--	--
Morrill	4,040	463	235	--	--	--	--	45	253	2,787	257	--	--	--	--
Perkins	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock	12,356	5,288	286	1,343	--	57	--	22	462	4,634	175	--	25	26	38
Scotts Bluff	6,092	623	370	20	--	--	--	21	213	4,619	215	--	11	--	--
Sheridan	165,662	161,587	19	452	--	23	--	12	372	2,899	266	--	24	3	5
Sioux	204,763	200,459	64	591	--	23	--	58	295	3,049	177	--	25	9	13
Thomas	17,097	15,344	24	380	--	22	--	--	118	1,188	17	--	--	2	2
Wheeler	6,749	781	10	1,150	--	74	--	12	397	4,239	69	--	13	2	2
Total	1,013,747	781,654	7,956	32,279	--	3,145	--	713	15,689	160,520	8,225	--	1,717	791	1,058
All units	1,711,873	781,654	18,000	138,956	3,363	25,795	11,301	17,392	89,308	510,947	31,457	12,823	44,675	11,030	15,172